

**Survival Craft should provide out-of-the-water protection for all persons.**

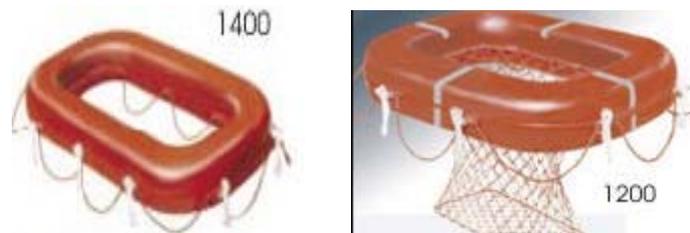
Richard C. Hiscock, 2007

This is a very straightforward proposition: An approved “survival craft” must be able to support **out-of-the-water** the individuals it is certified to carry. A 6 person device must be able to support 6 persons out-of-the-water; a 25 person device must be able to support 25 persons out-of-the-water.

This proposal does not address what vessels must carry survival craft, the areas of operation of those vessels, or the temperature of the water. It simply says that the Secretary may not approve a device, as a survival craft, unless it provides out-of-the-water protection for all persons it is certified to carry.

Nor does this proposal require that all survival craft be inflatable. We expect ingenious entrepreneurs will come up with designs for rigid survival craft that are capable of supporting individuals out of the water. In fact we are aware of one such design dating from the 1940s.

The importance of providing survival craft that will support individuals out-of-the-water cannot be overstated – think of the infant, the elderly, and the disabled. How are they to hang one of the currently approved devices – a “buoyant apparatus or “life float” – that amounts to not much more than a large life ring?



Rigid buoyant apparatus (left) vs life float (right)

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The need to provide out-of-the-water protection for survivors of maritime casualties has been understood for many years. The National Transportation Safety Board (NTSB), and others, have been pressing the Coast Guard on this issue for decades.

In 1973 both the Coast Guard and the National Transportation Safety Board (NTSB) investigated the loss of the M/V *Comet* off Point Judith, Rhode Island

resulting in the loss of 16 lives. The NTSB examined carefully the issue of 'lack of Protection in Cold Water' and concurred with the Coast Guard's Marine Board recommendation that **primary lifesaving devices should keep people out of the water when water temperature is expected to be 60°F or less.** The Commandant rejected this recommendation.

This was not the first time that the NTSB investigated the impact of cold water on survival, nor would it be the last. They had done so two years earlier in the case of the M/V *Maryland* that foundered in Albemarle Sound, North Carolina in December of 1971, and they continue to make similar – and stronger – recommendations right up to the present day. In their 1989 study entitled "Passenger Vessels Operating from U.S. Ports" the Board recommended that the U.S. Coast Guard:

Require that **all** passenger vessels except ferries on river routes operating on short runs of 30 minutes or less have primary lifesaving equipment that prevents immersion in the water for **all** passengers and crew.

In December 1989, shortly after the NTSB issued its Study, the "small passenger vessel" *Bronx Queen*, a "head-boat", sank near the entrance to New York harbor with 19 persons on board. Two passengers died and four were injured, despite immediate response of rescue resources. The Coast Guard conducted a thorough investigation of the casualty. The vessel was carrying 'life-floats' for 68 persons. The investigating officer concluded – among other things –

... that buoyant apparatus which do not provide out-of-the-water capabilities do not provide adequate protection for people in cold water operations." He recommended, "... that the Coast Guard promulgate regulations requiring that primary life saving equipment for small passenger vessels operating in cold water be of a **type which provides out-of-the-water protection.**"

"In a letter dated November 15, 1989, to the Coast Guard, the Safety Board stated:

Life floats (and non-inflatable buoyant apparatus) are antiquated pieces of survival gear that should no longer be allowed on board inspected vessels. They should be phased out of service, just as the cork life preservers and calcium carbide water light were phased out of service. The Safety Board opposes the continued use of life floats and non-inflatable buoyant apparatus as primary lifesaving devices."

That same year the Safety Board specifically recommend that Coast Guard, “require that **all** passenger vessels [whether inspected or uninspected] except ferries on river routes operating on short runs of 30 minutes or less have primary lifesaving equipment that prevents immersion in the water for **all** passengers and crew.” [NTSB 1989]

In December 1993 the charter-fishing vessel *El Toro II* foundered in Chesapeake Bay with 23 people on board. The vessel had ‘life-floats’ (buoyant apparatus) on board for only 20 people. Two passengers and one crewmember died, from the effects of hypothermia. The NTSB reiterated its recommendation that the Coast Guard “require that **out-of-the-water survival craft** for **all** passengers and crew be provided on board small passenger vessels on **ALL** routes.”

It has been understood – since at least World War II – that out-of-the-water survival craft provide much needed protection for survivors in the water, cold or warm. In 1944 the Navy Department’s Emergency Rescue Equipment Section (the predecessor the Air-Sea Rescue Agency), in a By-Weekly Report (dated 12 February), makes the following observations about “Balsa ‘Doughnut’ life floats” sometimes known as ‘Carley floats’ for Horace Carley who designed them in 1901!

... this type of rectangular canvas covered balsa-wood ‘doughnut’ with net-suspended platform or grating has been in general use by the Navy and Merchant Marine.

**This type of float has a serious drawback in that the survivors are partially immersed. As a consequence, the time allowance for rescue is cut to a minimum because it is virtually impossible to survive for any length of time in cold waters, particularly those found above and below the equatorial belt.**

Buoyant Apparatus and Life Floats, “which have been in use on commercial vessels for at least 70 years, are similar in that they are both like very large life rings. The primary difference is that a life float includes a platform suspended from the buoyant portion of the device by netting or similar means. **Neither device supports a person out of the water**; with the exception of a few persons who might be able to stand on the platform in the center of a life float and only be immersed waist-deep, **they generally only provide something for persons in the water to hold on to, with most of the rated capacity hanging on the outside edge.**” [From Coast Guard “Report on Small Passenger Vessel Safety”, March 2005.] Emphasis added.



Life float (bottom left) vs inflatable buoyant apparatus (top right)

When Chapter III of SOLAS was completely revised at IMO, a functional approach was followed to assess vessel abandonment and to determine the make up of a vessel's lifesaving system. The basic functional requirement agreed was that there must be survival craft sufficient to accommodate all on board. This was augmented by a functional requirement that the survival craft must provide "out of water" protection for all those on board the craft to ensure that all persons the survival craft is certified to accommodate are fully protected from immersion in the water.

These are the two basic fundamental requirements of a vessel's lifesaving system. The United States was the leader in developing the revised SOLAS and the major proponent of the functional approach to development of the revised requirements. The requirements are fully embedded in SOLAS and have stood the test of time. Survival craft meeting these requirements are readily available and USCG approved. Application of these same functional requirements to domestic vessels is entirely appropriate. US mariners and passengers on domestic voyages are entitled to the same level of protection as mariners and passengers on international voyages, and that the FAA requires for passengers on aircraft operating over-water.